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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,067	06/24/2004	Won-Sup Lee	YOM-0091	9136

23413 7590 06/28/2006

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EXAMINER	
RODEE, CHRISTOPHER D	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Acti n Summary	Application No. 10/500,067	Applicant(s) LEE ET AL.	
	Examiner Christopher RoDee	Art Unit 1756	

-- The MAILING DATE of this communication app ars on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

4)☒ Claim(s) 2-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 2-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/24/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 2 is objected to because of the following informalities: the description of "c)" in claim 2 contains typographical errors in the passage "2.Swt%" and "230m^2lg". These appear to be inadvertent errors in transcription on claim 2 from the original. Appropriate correction is required.

Claim 7 is objected to because of the following informalities: Claim 7 contains an editorial error in the units for the size of the toner. The units should be μm not pm. See original claim 7. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The instant claims are indefinite because the toner composition contains 100 weight % of the magnetic toner particles and additional weight percentages of the components a), b), c) and d). The total percentage of the components is larger than 100 weight percent. The weight percentage appears to be used in a manner contrary to its usual and customary form or manner because the total weight percent of the toner composition cannot be larger than 100 weight % of

the components. If applicants use a term in manner different from that considered to be usual and customary it is incumbent on applicant to provide a clear definition of that term. The instant claims do not so define the term weight percent (i.e., "wt%"). The claims are, consequently, indefinite because the term weight percent is being used in a different manner from its usual meaning but fail to properly describe that meaning.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami *et al.* in US Patent 6,287,739.

Kawakami discloses a toner having a weight-average particle diameter of 4 to 9 μm. The toner contains a magnetic material in an amount of from 40 to 150 parts by weight per 100 parts of the monomer used to form the binder resin (col. 13, l. 26-30), a release agent in an amount of from 0.1 to 20 parts by weight (col. 15, l. 33-60), and a charge control agent in an amount of from 0.1 to 15 parts by weight (col. 15, l. 29-32; col. 15, l. 61 – col. 16, l. 8). The toner also contains a mixture of external additives comprising a small particle diameter hydrophobic silica (A) in an amount of from 0.3 to 2.5 parts by weight, more preferably 0.5 to 2.0 parts by weight (col. 6, l. 43-54); a large particle diameter hydrophobic silica (B) in an amount of from 0.05 to 1.5 parts by weight, preferably 0.1 to 1.0 parts by weight (col. 6, l. 55-65) and a fine alumina particle (C) in an amount of 0.01 to 2.0 parts by weight, preferably 0.03 to 1.5 parts by

weight (col. 7, l. 66 – col. 8, l. 2). The small particle diameter silica (A) has a BET specific surface area of 100 to 350 m^2/g, the large-particle-diameter silica (B) has a BET specific surface area of 15 to 80 m^2/g, and the alumina particle (C) has a BET specific surface area of 50 to 150 m^2/g (col. 2, l. 45-53).

Exemplified binder resins according to the invention are styrene-butyl acrylate and polyester (Examples 1-3). Exemplified charge control agents include salicylic acid compounds (Example 3). Example 3 shows an external additive combination containing 1.3 parts based on 100 parts of toner of a hydrophobic silica having a size of 160 m^2/g, 0.4 parts of a hydrophobic silica having a size of 55 m^2/g, and 0.1 parts of alumina. A silazane and a silicone oil are used as the silica treating compounds that render the silicas hydrophobic in this example. This example also uses 0.8 weight % of a charge control agent.

The toner can be used as a one-component developer (col. 16, l. 20-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use each of the disclosed external additives with surface area characteristics (e.g., as in Example 3) in amounts within the ranges disclosed (e.g., 40 parts of magnetic material per 100 parts of binder resin; 0.8 weight % of a charge control agent; 2 parts by weight of hydrophobic silica (A), 1.5 parts by weight of hydrophobic silica (B), 1.5 parts of alumina (C)) because each of these features is taught by the reference as effective to form a toner that does not cause fog, faulty cleaning, low transfer rate, while giving good chargeability and fluidity.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami *et al.* in US Patent 6,287,739 as applied to claims 2, 3, and 5-9 above, and further in view of *Handbook of Imaging Materials* (2nd edition) to Diamond *et al.*.pp. 178-182.

Kawakami was discussed above. The reference discloses magnetic additives for toners but does not disclose a specific magnetic material within the scope of claim 4. However, Diamond teaches that magnetite is a typical magnetic additive to give a magnetic toner for singe component applications.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use magnetite as the magnetic material in the invention of Kawakami because Kawakami teaches that a magnetic material may be added and the Diamond text teaches that magnetite is a conventionally used magnetic material for this purpose.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cdr
21 June 2006

CHRISTOPHER RODEE
PRIMARY EXAMINER